

A descriptive review of historical researches in ICT sector

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ABSTRACT: The Central Government of India has initiated various programs to increase the participation and proactive involvement from Indian citizens in commencing business ventures. Make in India, digital India, start-up India are some of notable campaigns to boost the entrepreneurial spirit Indian youths. The Government is also taking relentless efforts to attract the foreign direct investment in India by giving certain leverage to the foreign multinational companies. This will empower them to setup business units across the country wherein thousands of jobs can be created in future. The present research makes an attempt to study past researches in ICT start-up companies. The research focuses on factors of ICT growth, challenges faced by ICT, Innovations in ICT and Incubation centres of ICT companies. The results bring out the major findings from past researches.

KEYWORDS: ICT, Factors of ICT growth, challenges faced by ICT, Innovations in ICT, Incubation centres

I. INTRODUCTION

The age of 21st century is marked by the knowledge-based economies all over the world. There are several reasons for the transition from core manufacturing to service based industrial growth in developed, developing and underdeveloped economies as well. A developing economy like India could make the most out of such LPG models which is why the Information and communication Technology (ICT) could contribute largely to the Indian GDP and create millions of job opportunities for Indian youths in cities like Bangalore, Hyderabad, Chennai, Mumbai, Pune, NCR, Delhi and others. The major ICT giant players like Tata Consultancy Services (TCS), Cognizant, Wipro, Infosys could tie-up with the US-based firms and serve them with service excellence and create cost effective business model changing the perspective towards the India as the best option. It further created huge scope for Information Technology Enabled Services (ITES) as shared and

support services through outsourcing various processes, tasks at lower costs in higher volumes of work.

Together, ICT and ITES have brought massive positive change in employment, socio-economic development, and created identity of India as an IT Hub in the international market (Afuah and Tucci, 2003). There are numerous aspects which matter while starting a new venture. The first and foremost one must be with the unique and creative company profile. It generally includes company name, creative and meaningful logo, the tagline followed by the vision, mission and core business values for the company. The business values indicate the management philosophy and object is behind establishing the enterprises. All of these help the investors, customers, creditors, employees and government agencies to understand the prime motive of setting a new business.

There are various challenges Faced by ICT Start-ups include leadership development and excellence, raising funds, communication and coordination in the sector, multilevel / multidisciplinary business gap and wide skill gap. Innovative Practices followed by ICT Start-ups include reliable Corporate Governance, Digital Transformation, E-Entrepreneurship, Shared services and Freelancing.

II. RESEARCH METHODOLOGY

Study objective:

The study's main objective is an analysis of ICT sector with respect to:

- Factors leading to growth in ICT sector
- Challenges faced by ICT sector
- Innovations in ICT sector
- ICT Incubation centres

Scope of the study

The study includes papers related Factors of ICT growth, challenges faced by ICT, Innovations in ICT and Incubation centres of ICT companies only.

Secondary data

The examination depends on secondary information that has been gathered from yearly reports of the ICT companies, research papers and other distributed data.

III. DISCUSSION

III.1. Literature associated with Factors of ICT growth.

Frank Lasch (2015) analysed 220 start-ups in the ICT services sector and measured the impact of internal and external growth factors. The study found individual emotional intelligence and capacity to function had no direct effect on the success of young ICT firms. This also reported that finance and customer-related variables are most important growth factors. Lasch, Frank Le Roy, Frédéric; Yami, Saïd (2005) focused on the study of key factors for the sustenance and progress of ICT start-ups. The results obtained show that human resources and the knowledge of the entrepreneur has had a very low influence on the effectiveness of the ITC start-up. Similarly, the strength of the formation is not inherently a key factor of success.

José Santisteban, David Mauricio (March 2016) said that “In the industry of Information Technology (IT) Start-up, high birth rates go hand in hand with a high risk of failure; only one in three survive the first three years”. Author in his paper represented Systematic Literature Review of critical success factors of IT Start-ups.

Maria José Sousa, (2016) explored the idea of entrepreneurship and the value of skills learning for entrepreneurs to create and manage IT projects. Research revealed the soft skills that entrepreneurs need to build in order to create and manage IT projects and to recognize emerging technologies need to be analysed, given the current economic conditions, in order to raise awareness of the opportunities to promote entrepreneurial activity.

Purnima, Manbir Sandhu and Gurpreet Kaur (February 2018) concentrated their efforts on the ability of ICT, its crucial role in motivating communities for self-efficiency, and that this project can be supported to rural level. Research has concluded that ICT is a crucial part of the success of the currently underway Start-up India campaign.

Researcher also found that the experience previous start-up of the founding team and government support factors affect the seed stage; the venture capital factor affects the early stage; the clustering, technological/business capabilities of the founding team and venture capital factors affect the growth stage; and the clustering factor affects the expansion stage.”

III.2. Literature associated with challenges faced by ICT

In their work, Duy Anh Vu & Quynh Hoa Bui (2012) contributed to a deeper understanding of current research focused on factors that lead to the success of software companies in Vietnam.

Investigators have seen a variety of variables in the study of the applicable literature for the investigation. Such considerations include vision, organizational efficiency, founder temperament, finance, and employability. In his paper, Dr. Gopaldas Pawan Kumar (2016) addresses several problems and challenges facing an Indian start-up and the opportunities that the country can offer in the current ecosystem. The concept behind the goals of business, market size, sales and income are some of the important considerations that need to be clearly identified before embarking on a journey. Time, coordination and tenacity are essential factors that decide entrepreneurial performance.

The Emerging Markets Technology Entrepreneurship Challenges were discussed by Marlen de la Chaux and Angela Okune (2017), with specific focus on the Nairobi IT climate. Computer scientists, bloggers, and software pioneers in Nairobi in particular have created and grasped opportunities for emerging technology businesses.

Hanadi Mubarak Al-Mubarak and Michael Busler (2017) sought to examine and consider the challenges and opportunities of creativity and incubator programs and their potential implementation worldwide. The author has added value to the current literature on innovation and incubators, and fills the gap in case studies in developed and developing countries literature, and offers a more comprehensive analysis of growth and knowledge-based economies challenges.

The Indian Startup Ecosystem was discussed by Sabrina Korreck (September 2019): Drivers, Problems, and Help Pills. The author focuses on the current state of the Indian start-up ecosystem and has three objectives: to provide an overview of Indian start-up founders' growth factors and motivations; to identify the challenges that these start-ups face; and to outline the structures that are in place to support them.

III.3. Literature associated with Innovations in ICT

WEI-WEN WU, (June 2009) study concentrated on how to encourage the efforts of an individual to become a small business entrepreneur through the evaluation and creation of competencies. The study found that the Competence Model of the Entrepreneur and the RST and Best Attribute Value (BAV) can be used to evaluate how

similar competencies exist between small business entrepreneurs and large business managers. The findings of this study show that a small business entrepreneur usually excels at creating a talent development system, while a large company manager is fantastic at understanding the fundamental urgency of the problems, or having realistic alternatives to action. Hence, if a big company boss wishes to imitate a small business entrepreneur, the advice is to de-emphasize abstract thought and paper work and to engage in much more human networking.

Biswajit Dhar and Sabyasachi Saha (March 2014) presented a comprehensive overview of India's innovation policy system to assess its role in innovation and business growth in the Indian industry. Researcher highlighted the current bottlenecks in India's national innovation program. The researcher also suggested streamlining the availability of broad-based skills to take advantage of specialization opportunities, industrial growth and the information economy, and to achieve frontier R & D focused on pro-poor inventions, niche expertise and green technologies.

Alessandra Colombelli, Jackie Krafft Marco Vivarelli (February 2016) addressed why entry is not inherently good per se and the evidence shows that imaginative start-ups survive a lot longer than their non-innovative rivals do.

Work goes beyond a strictly microeconomic point of view and explores the crucial role that innovative inputs play in the environment. The findings support the proposal that the growth and survival of creative start-ups should become one of the core aspects of the economic policy agenda J.-C. Spender, et.al. (January 2017) argued that Start-up companies are a strong driver of open innovation processes. They illustrated several popular difficulties and challenges that start-ups encounter in the adoption of open product innovation along with their benefits.

In their paper, Muhammad Usman, Wim Vanhaverbeke (November 2017) The study addressed the crucial role of start-up manager in the successful development of agile technology and illustrates how start-up executives with prior experience operating in / with a big corporation can cope with and develop better in the innovation

IV. MAJOR FINDING

From the research it was found that

- Important development drivers are mostly funding and customer-related variables.
- ICT is a contributing factor to the progress of the current Start-up India initiative.

system.

III.4. Literature associated with Incubation centres

Omer Cegri Ozdamir & Yasin Sehitoglu, (2013) argued that & quoted "entrepreneurship and innovation have been widely accepted as key sources of business growth, high value-added job creation and national economic development. The study reviewed the related work on the performance of business incubators as a support tool for small and medium-sized enterprises and also its importance for Turkey, with a particular focus on the assessment of the performance of incubators in the case of Turkey. The researcher also tried to add a framework for assessing technology business incubators in Turkey on the basis of the development stage model."

Labib Arafteh, (2016) reviewed the culture of entrepreneurship and entrepreneurship in Palestine. The proposed Model of Entrepreneurship Key Competencies (SKECM) based on soft computing. This method is capable of predicting and assessing the overall standard of entrepreneurial skills.

Aimal Mirza; Meena Rahmani, (December 2016) tried to emphasize the value of business incubation centres in the reference of Afghanistan for this reason. Studies have shown that factors such as physical infrastructure incubation centers, market support, management advice and therapy, enabling climate and sound incubation centering practices have resulted in the survival and growth of many small businesses.

Dr K. Sunanda, (2017) underscored in his work on the establishment and management of start-ups and the steps taken by the Government of India with the help of some of the start-up case studies in India.

Dr Balvinder Shukla, Apoorv Ranjan Sharma, Dr Manoj Joshi (November 2017) addressed the need for a deeper understanding of the challenges facing these existing Business Incubators (BI) in their Business Model, as well as the need to improvise a regulatory environment for start-ups and angel investors. Based on the analysis, it was found that there is a positive effect of BI on start-up victory

- Human resources and the expertise of the entrepreneur have a very low impact on the progress of the start-up of the ICT.
- Factors such as vision, organizational ability, founder temperament, finance and employee ability contribute to the performance of software companies; Time, coordination and tenacity are

essential factors that decide entrepreneurial performance.

- Computer scientists, bloggers and innovation pioneers have developed and exploited opportunities to develop technology businesses.
- To provide an overview of the growth factors and motives of Indian start-ups; to define the obstacles facing these start-ups; and to outline the structures in place to help them are the three objectives of the Indian start-up ecosystem.
- Streamline the availability of specific skills to take advantage of specialization opportunities, economic growth and the information economy;
- The development and sustainability of creative start-ups will become one of the core aspects of the financial legislative agenda.
- A small firm entrepreneur usually excels in building a system for cultivating talent, whereas a big firm manager is good at knowing the specific urgency of the elements of the problem

IV. CONCLUSION

The research was an attempt to analyse the past researches in ICT sector. The research broadly focuses on Factors of ICT growth, challenges faced by ICT, Innovations in ICT and Incubation centres.

The major gap that was found that researches are carried out at broader level, Niche level research finds a scope for future work. Also multi-dimensional researches can be conducted in future for 360-degree performance measurement of ICT Companies.

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